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MEMORANDUM

TO: Chris Lichens, Remedial Project Manager
Site Cleanup Section 4, SFD-7-4

THROUGH: Rose Fong, ESAT Task Order Project Officer (TOPO) RF
Quality Assurance (QA) Program, MTS-3

FROM: Doug Lindelof, Data Review Task Manager
Region 9 Environmental Services Assistance Team (ESAT)

ESAT Contract No.: EP-W-06-041
Technical Direction Form No.: 00105001

DATE: June 28, 2006

SUBJECT: Review of Analytical Data, Tier 3

Attached are comments resulting from ESAT Region 9 review of the following analytical data:

Site:	Omega Chem OU2
Site Account No.:	09 BC LA01
CERCLIS ID No.:	CAD042245001
Case No.:	32648
SDG No.:	Y19J8
Laboratory:	Envirosystems (ENVSYS)
Analysis:	Semivolatiles
Samples:	2 Groundwater Samples (see Case Summary)
Collection Date:	March 5, 2004
Reviewer:	Calvin Tanaka, ESAT/Laboratory Data Consultants

This report has been reviewed by the EPA TOPO for the ESAT contract, whose signature appears above.

If there are any questions, please contact Rose Fong (QA Program/EPA) at (415) 972-3812.

Attachment

cc: Dan Slizys, CLP PO USEPA Region 3
Steve Remaley, CLP PO USEPA Region 9

CLP PO: [X] Attention [ ] Action

SAMPLING ISSUES: [ ] Yes [X] No

Data Validation Report

Case No.: 32648
SDG No.: Y19J8
Site: Omega Chem OU2
Laboratory: Envirosystems (ENVSYS)
Reviewer: Calvin Tanaka, ESAT/LDC
Date: June 28, 2006

I. CASE SUMMARY

Sample Information

Samples:	Y19J8 and Y19J9
Concentration and Matrix:	Low Concentration Water
Analysis:	Semivolatiles
SOW:	OLC03.2
Collection Date:	March 5, 2004
Sample Receipt Date:	March 6, 2004
Extraction Date:	March 9, 2004
Analysis Date:	March 10, 2004

Field QC

Field Blanks (FB):	Not Provided
Equipment Blanks (EB):	Not Provided
Background Samples (BG):	Not Provided
Field Duplicates (D1):	Not Provided

Laboratory QC

Method Blanks & Associated Samples:

SBLK15:	Y19J8 and Y19J9

Tables

1A:	Analytical Results with Qualifications
1B:	Data Qualifier Definitions for Organic Data Review
2:	Calibration Summary

CLP PO Action

None.

CLP PO Attention

1. Detected results for acetophenone in sample Y19J9 is qualified as nondetected and estimated (U,J) due to method blank contamination (see Comment B).

2. Results for some analytes are qualified as estimated (J) due to calibration problems (see Comments C and D).

3. Results for some analytes are qualified as estimated (J) due to deuterated monitoring compound (DMC) recovery problems (see Comment E).

Sampling Issues

None.

Additional Comments

Other than a laboratory artifact (approximate retention time of 14.2 minutes), tentatively identified compounds (TICs) were found in the sample Y19J9 (see attached Form 1LCG).

The laboratory performed manual integrations on the method blank SBLK15 due to incorrect auto integration. Manual integrations were reviewed and found to be satisfactory and in compliance with proper integration techniques.

This report was prepared in accordance with the following documents:

- ESAT Region 9 Standard Operating Procedure 901, *Guidelines for Data Review of Contract Laboratory Program Analytical Services (CLPAS) Volatile and Semivolatile Data Packages*;
- *USEPA Contract Laboratory Program Statement of Work for Analysis for Organic Analysis,* OLM04.2, May 1999; and
- *USEPA Contract Laboratory Program National Functional Guidelines for Low Concentration Organic Data Review*, June 2001.

II. VALIDATION SUMMARY

The data were evaluated based on the following parameters:

	Parameter	Acceptable	Comment
1.	Holding Time/Preservation	Yes	
2.	GC/MS Tune/GC Performance	Yes	
3.	Initial Calibration	No	C
4.	Continuing Calibration	No	D
5.	Laboratory Blanks	No	B
6.	Field Blanks	N/A	
7.	Deuterated Monitoring Compounds	No	E
8.	Matrix Spike/Matrix Spike Duplicates	N/A	
9.	Laboratory Control Samples/Duplicates	N/A	
10.	Internal Standards	Yes	
11.	Compound Identification	Yes	
12.	Compound Quantitation	Yes	A
13.	System Performance	Yes	
14.	Field Duplicate Sample Analysis	N/A	

N/A = Not Applicable

III. VALIDITY AND COMMENTS

A. The following results, denoted with an "L" qualifier, are estimated and flagged "J" in Table 1A.

- All detected results below the contract required quantitation limits

Results below the contract required quantitation limits (CRQLs) are considered to be qualitatively acceptable, but quantitatively unreliable, due to the uncertainty in analytical precision near the limit of detection.

B. The following result is qualified as nondetected and estimated due to method blank contaminations and is flagged "U,J" in Table 1A.

- Acetophenone in sample Y19J9

Acetophenone was found in method blank SBLK15 (see Table 1A for concentrations). Results for the sample listed above are considered nondetected and estimated (U,J) and quantitation limits have been raised according to blank qualification rules presented below.

No positive results are reported unless the concentration of the compound in the sample exceeds 10 times the amount in any associated blank for common laboratory contaminants or 5 times the amount for other compounds. If the sample result is greater than the CRQL, the quantitation limit is raised to the sample result and reported as nondetected. If the sample result is less than the CRQL, the result is reported as nondetected at the CRQL.

A laboratory method blank is laboratory reagent water or baked sand analyzed with all reagents, deuterated monitoring compounds, and internal standards and carried through the same sample preparation and analytical procedures as the field samples. The laboratory method blank is used to determine the level of contamination introduced by the laboratory during analysis.

C. Results for the following analyte are qualified as estimated due to a large percent relative standard deviation (%RSD) in the initial calibration and are flagged "J" in Table 1A.

- Di-n-octylphthalate in all samples and method blank SBLK15

A %RSD of 30.6% was reported for di-n-octylphthalate in the initial calibration. This value exceeds the ≤30.0% validation criterion.

The initial calibration demonstrates that the instrument is capable of acceptable performance in the beginning of the analytical run and of producing a linear calibration curve.

D. Results for the following analytes are qualified as estimated due to large percent differences (%Ds) in the continuing calibration and are flagged "J" in Table 1A.

- 4-Nitroaniline and di-n-octylphthalate in all samples and method blank SBLK15

%Ds of 56.6% and 84.2% were reported for 4-nitroaniline and di-n-octylphthalate, respectively, in the continuing calibration. These values exceed the ±30.0% validation criterion.

The continuing calibration checks the instrument performance daily and produces the relative response factors (RRFs) for target analytes that are used for quantitation.

E. Results for the following analytes are qualified as estimated due to DMC recoveries outside QC limits and are flagged "J" in Table 1A.

{Dimethylphthalate-d6}
- Caprolactam, 1,1'-biphenyl, dimethylphthalate, diethylphthalate, di-n-butylphthalate, butylbenzylphthalate, bis(2-ethylhexyl)phthalate, and di-n-octylphthalate in samples Y19J8 and Y19J9

{4,6-Dinitro-2-methylphenol-d2}
- 4,6-Dinitro-2-methylphenol in samples Y19J8 and Y19J9

{Anthracene-d10}
- Hexachlorobenzene, atrazine, phenanthrene, and anthracene in sample Y19J9

{Benzo(a)pyrene-d12}
- Benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, dibenz(a,h)anthracene, and benzo(g,h,i)perylene in samples Y19J8 and Y19J9

The DMC recoveries outside QC limits are shown below.

Sample	DMC	% Recovery	QC Limits
Y19J8	Dimethylphthalate-d6	58%	62-102
Y19J9	Dimethylphthalate-d6	55%	62-102
Y19J8	4,6-Dinitro-2-methylphenol-d2	42%	53-153
Y19J9	4,6-Dinitro-2-methylphenol-d2	38%	53-153
Y19J9	Anthracene-d10	50%	55-116
Y19J8	Benzo(a)pyrene-d12	48%	54-120
Y19J9	Benzo(a)pyrene-d12	35%	54-120

Detected results for affected analytes where DMC recoveries fell below QC limits may be biased low; where results are nondetected, false negatives may exist.

Surrogates (e.g., deuterated monitoring compounds (DMCs)) are organic compounds which are similar to the target analytes in chemical composition and behavior in the analytical process; but which are not normally found in environmental samples. All samples are spiked with DMCs prior to purging. DMCs provide information about both the laboratory performance on individual samples and the possible effects of the sample matrix on the analytical results.

ANALYTICAL RESULTS
Table 1A

Case No. : 32648 SDG No. : Y19J8
Site : OMEGA CHEM OU2
Lab : ENVIROSYSTEMS, INC.
Reviewer : Calvin Tanaka, ESAT/LDC
Date : June 28, 2006

QUALIFIED DATA
Concentration in ug/L

Analysis Type : Low Level Water Samples
For Semivolatiles

Station Location :	21			22			Method Blank													
Sample ID :	Y19J8			Y19J9			SBLK15			CRQL										
Collection Date :	3/5/2004			3/5/2004																
Dilution Factor :	1.0			1.0			1.0													
Semivolatile Compound	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**
Diethylphthalate	5.0U	J	E	5.0U	J	E	5.0U			5.0										
Fluorene	5.0U			5.0U			5.0U			5.0										
4-Chlorophenyl-phenylether	5.0U			5.0U			5.0U			5.0										
4-Nitroaniline	20U	J	D	20U	J	D	20U	J	D	20										
4,6-Dinitro-2-methylphenol	20U	J	E	20U	J	E	20U			20										
N-Nitrosodiphenylamine	5.0U			5.0U			5.0U			5.0										
1,2,4,5-Tetrachlorobenzene	5.0U			5.0U			5.0U			5.0										
4-Bromophenyl-phenylether	5.0U			5.0U			5.0U			5.0										
Hexachlorobenzene	5.0U			5.0U	J	E	5.0U			5.0										
Atrazine	5.0U			5.0U	J	E	5.0U			5.0										
Pentachlorophenol	5.0U			5.0U			5.0U			5.0										
Phenanthrene	5.0U			5.0U	J	E	5.0U			5.0										
Anthracene	5.0U			5.0U	J	E	5.0U			5.0										
Di-n-butylphthalate	5.0U	J	E	5.0U	J	E	5.0U			5.0										
Fluoranthene	5.0U			5.0U			5.0U			5.0										
Pyrene	5.0U			5.0U			5.0U			5.0										
Butylbenzylphthalate	5.0U	J	E	5.0U	J	E	5.0U			5.0										
3,3'-Dichlorobenzidine	5.0U			5.0U			5.0U			5.0										
Benzo(a)anthracene	5.0U			5.0U			5.0U			5.0										
Chrysene	5.0U			5.0U			5.0U			5.0										
bis(2-Ethylhexyl)phthalate	5.0U	J	E	1.7L	J	AE	5.0U			5.0										
Di-n-octylphthalate	5.0U	J	CDE	5.0U	J	CDE	5.0U	J	CDE	5.0										
Benzo(b)fluoranthene	5.0U	J	E	5.0U	J	E	5.0U			5.0										
Benzo(k)fluoranthene	5.0U	J	E	5.0U	J	E	5.0U			5.0										
Benzo(a)pyrene	5.0U	J	E	5.0U	J	E	5.0U			5.0										
Indeno(1,2,3-cd)pyrene	5.0U	J	E	5.0U	J	E	5.0U			5.0										
Dibenzo(a,h)anthracene	5.0U	J	E	5.0U	J	E	5.0U			5.0										
Benzo(g,h,i)perylene	5.0U	J	E	5.0U	J	E	5.0U			5.0										

Val - Validity. Refer to Data Qualifiers in Table 1B.
Com - Comments. Refer to the Corresponding Section in the Narrative for each letter.
CRQL - Contract Required Quantitation Limit, N/A - Not Applicable, NA - Not Analyzed

D1, D2, etc. - Field Duplicate Pairs
FB - Field Blank, EB - Equipment Blank, TB - Trip Blank, BG - Background Sample

ANALYTICAL RESULTS
Table 1A

Case No. : 32648 SDG No. : Y19J8
Site : OMEGA CHEM OU2
Lab : ENVIROSYSTEMS, INC.
Reviewer : Calvin Tanaka, ESAT/LDC
Date : June 28, 2006

QUALIFIED DATA
Concentration in ug/L

Analysis Type : Low Level Water Samples For Semivolatiles

Station Location :	21			22			Method Blank			CRQL											
Sample ID :	Y19J8			Y19J9			SBLK15														
Collection Date :	3/5/2004			3/5/2004																	
Dilution Factor :	1.0			1.0			1.0														
Semivolatile Compound	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**
Benzaldehyde	5.0U			5.0U			5.0U			5.0											
Phenol	5.0U			5.0U			5.0U			5.0											
bis-(2-Chloroethyl) ether	5.0U			5.0U			5.0U			5.0											
2-Chlorophenol	5.0U			5.0U			5.0U			5.0											
2-Methylphenol	5.0U			5.0U			5.0U			5.0											
2,2'-oxybis(1-Chloropropane)	5.0U			5.0U			5.0U			5.0											
Acetophenone	5.0U			5.0U	J	B	1.1L	J	A	5.0											
4-Methylphenol	5.0U			5.0U			5.0U			5.0											
N-Nitroso-di-n-propylamine	5.0U			5.0U			5.0U			5.0											
Hexachloroethane	5.0U			5.0U			5.0U			5.0											
Nitrobenzene	5.0U			5.0U			5.0U			5.0											
Isophorone	5.0U			5.0U			5.0U			5.0											
2-Nitrophenol	5.0U			5.0U			5.0U			5.0											
2,4-Dimethylphenol	5.0U			5.0U			5.0U			5.0											
bis(2-Chloroethoxy)methane	5.0U			5.0U			5.0U			5.0											
2,4-Dichlorophenol	5.0U			5.0U			5.0U			5.0											
Naphthalene	5.0U			5.0U			5.0U			5.0											
4-Chloroaniline	5.0U			5.0U			5.0U			5.0											
Hexachlorobutadiene	5.0U			5.0U			5.0U			5.0											
Caprolactam	5.0U	J	E	5.0U	J	E	5.0U			5.0											
4-Chloro-3-methylphenol	5.0U			5.0U			5.0U			5.0											
2-Methylnaphthalene	5.0U			5.0U			5.0U			5.0											
Hexachlorocyclopentadiene	5.0U			5.0U			5.0U			5.0											
2,4,6-Trichlorophenol	5.0U			5.0U			5.0U			5.0											
2,4,5-Trichlorophenol	20U			20U			20U			20											
1,1'-Biphenyl	5.0U	J	E	5.0U	J	E	5.0U			5.0											
2-Chloronaphthalene	5.0U			5.0U			5.0U			5.0											
2-Nitroaniline	20U			20U			20U			20											
Dimethylphthalate	5.0U	J	E	5.0U	J	E	5.0U			5.0											
2,6-Dinitrotoluene	5.0U			5.0U			5.0U			5.0											
Acenaphthylene	5.0U			5.0U			5.0U			5.0											
3-Nitroaniline	20U			20U			20U			20											
Acenaphthene	5.0U			5.0U			5.0U			5.0											
2,4-Dinitrophenol	20U			20U			20U			20											
4-Nitrophenol	20U			20U			20U			20											
Dibenzofuran	5.0U			5.0U			5.0U			5.0											
2,4-Dinitrotoluene	5.0U			5.0U			5.0U			5.0											

TABLE 1B

DATA QUALIFIER DEFINITIONS FOR ORGANIC DATA REVIEW

The definitions of the following qualifiers are prepared according to the document, "USEPA Contract Laboratory Program National Functional Guidelines for Low Concentration Organic Data Review," June 2001.

U	The analyte was analyzed for, but was not detected above the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method.
L	Indicates results which fall below the Contract Required Quantitation Limit. Results are estimated and are considered qualitatively acceptable but quantitatively unreliable due to uncertainties in the analytical precision near the limit of detection.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
UJ	The analyte was not detected above the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.
R	The sample results are unusable. The analyte may or may not be present in the sample.

1LCG

EPA SAMPLE NO.

LOW CONCENTRATION. WATER SEMIVOLATILE ORGANICS ANALYSIS
DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

Y19J9

Lab Name: ENVIROSYSTEMS, INC. Contract: 68W01044

Lab Code: ENVSYS Case No.: 32648 Client No.: SDG No.: Y19J8

Lab Sample ID: 04030821 Date Received: 03/06/04

Lab File ID: H73GQ154 Date Extracted: 03/09/04

Sample Volume: 1000.00 (ML) Date Analyzed: 03/10/04

Concentrated Extract Volume: 1000(UL) Dilution Factor: 1.0

Injection Volume: 1 (UL)

Number TICs found: 4

	CAS NUMBER	COMPOUND NAME	RT	EST.CONC. (ug/L)	Q
1.		UNKNOWN	13.86	3.7	J
2.		~~UNKNOWN~~	~~14.26~~	~~3.3~~	~~J~~
3.		UNKNOWN	14.71	3.1	J
4.		UNKNOWN	24.31	2.8	J
5.					
6.					
7.		SL, 6/28/06.			
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